

1 What is claimed is:

2 1. A computer-implemented visualization model of similarity relationships between
3 documents comprising:
4 performing a similarity search based on at least one attribute of a reference
5 document to find at least one target document with similar attributes;
6 creating a visual representation of the reference database document and the at
7 least one target document;
8 creating a visual representation of the similarities between the reference document
9 and the at least one target document; and
10 displaying the visual representations of the database documents and their
11 similarities on a graphical user interface.

1 2. The method according to claim 1 wherein the at least one target documents that
2 are similarity searched reside in a plurality of databases.

1 3. The method according to claim 1 wherein the similarity search returns a result set
2 of target documents that are used by the visualization model to create the visual
3 representation of the documents and the similarities between the documents.

1 4. A computer-implemented interactive visualization model of similarity
2 relationships between documents comprising:
3 using a similarity search performed on attributes of a reference document which
4 results in a set of 0 to n target documents with similar attributes;
5 creating a visual representation of the reference document and each target
6 document;

11 displaying the visual representations of the model node and model edge on a
12 graphical user interface.

1 9. The method according to claim 8 wherein the model node comprises:
2 a reference to the hierarchical object the model node represents;
3 a reference to at least one attribute of the hierarchical object used in the similarity
4 search if a model edge exists; and
5 visual properties of the hierarchical document the model node represents.

1 10. The method according to claim 8 further comprising storing the visual
2 representation of the reference model node, each target model node, and each
3 model edge in computer memory or on disk.

1 11. The method according to claim 8 wherein the model edge comprises:
2 an identifier of the reference model node from which the visual representation of
3 the model edge will extend and an identifier of the at least one target model node
4 to which the visual representation of the model edge will extend; and
5 a list of the similarity search attributes used in the similarity search.

1 12. The method according to claim 11 further comprising user chosen attributes to be
2 used in the similarity search.

1 13. A computer-implemented method of visualizing similarity relationships between
2 documents comprising:
3 using a reference hierarchical document;
4 performing a similarity search based on user selected attributes of the reference
5 hierarchical document and determining a result set of target documents
6 comprising 0 to n hierarchical documents;

7 converting each hierarchical document to a model node that visually represents
8 each hierarchical document to be displayed on a graphical user interface; and
9 using the similarity search results, creating a model edge that visually represents
10 the similarities between the reference hierarchical document and each hierarchical
11 document in the result set to be displayed on a graphical user interface.

1 14. The method of claim 13 further comprising displaying the model edge, model
2 node on a graphical user interface.

1 15. The method of claim 8, wherein each model edge indicates a degree of similarity
2 between the reference hierarchical object and the target hierarchical object is
3 displayed as a line connecting model nodes, said model nodes are depicted as
4 geometric shapes on the graphical user interface.

1 16. The method of claim 15, wherein the length of the line connecting the model
2 nodes varies as a function of the degree of similarity between the reference
3 document and the target document referenced by the model nodes.

1 17. The method of claim 1, wherein the visual representation is three dimensional.

1 18. A computer-readable medium containing instructions for a visualization model of
2 similarity relationships between documents comprising:
3 performing a similarity search based on at least one attribute of a reference
4 document to find at least one target document with similar attributes;
5 creating a visual representation of the reference database document and the at
6 least one target document;
7 creating a visual representation of the similarities between the reference document
8 and the at least one target document; and

